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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Paper No. 44

Application Number: 08/897,455
Filing Date: July 22, 1997
Appellant(s): STACHE ET AL.

Steven J. Scott
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed July 26, 2002.

(1) Real Party in Int rest

A statement identifying the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) Status of Claims

The statement of the status of the claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Invention

The summary of invention contained in the brief is correct.

(6) Issues

The appellant's statement of the issues in the brief is correct.

(7) Grouping of Claims

Appellant's brief includes a statement that claims 11-17 do not stand together and provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8).

(8) Claims App al d

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) Prior Art of Record

3,133,940	OUGHTON et al.	5-1964
3,201,391	BOWERS	8-1965
3,201,429	DJERASSI et al.	8-1965
4,655,971	PAGE et al.	4-1987

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 11-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Page et al. ('971).

Page et al. generically teach 17,21-dicarboxylic acid esters of 4-pregnen-3,20-dione having an oxo, halogen or a hydroxyl group in the 11-position and substituents in the 6, 9 and 16 positions which include those recited by the claimed invention. The reference teaches the compounds may also contain a double bond in the 1-position (col. 1, lines 1-55; col. 8, lines 47-59) and the use of the compounds in the treatment of corticosteroid-responsive dermatosis (col. 8, lines 30-41).

The instant claims differ from the reference by reciting specific species not exemplified by the reference, i.e., compounds wherein R(1) is phenyl which may be substituted as indicated by the claimed invention. However, the generic disclosure of

Page suggests most of the substituents of the claimed "Markush" structure including the claimed aralkyl ester group attached to the 21-position. Page discloses compounds of formula (I) wherein R_5 is OC(O)-R", wherein R" is an alkyl group of 1 to 16 carbon atoms, a phenyl group or an aralkyl group of 7 to 8 carbon atoms (i.e., $-(CH_2)_{1-2}$-phenyl). Applicant's claimed compound defining R(1) as a phenyl group is thus within the scope of the disclosure of Page et al. The motivation to make the claimed compounds is based on the desire to make additional compounds useful in the treatment of corticosteroid-responsive dermatosis as taught by the prior art.

Claims 11, 12, and 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Djerassi et al. ('429).

Djerassi et al. teach a generic group of 17,21-diesters of 6α,16α-dimethyl-4-pregnen-17α,21-diol-3,20-diones (see the entire article, especially col. 1, lines 14-53). The reference teaches acyl groups such as acetyl and phenylpropionyl (col. 1, lines 44-54), the optional double bond in the 1-position and that the compounds exhibit anti-inflammatory and glycogenic activity (col. 1, lines 19-26).

The instant claims differ from the reference by reciting specific species not exemplified by the reference, i.e., compounds wherein R(1) is phenyl which may be substituted as indicated by the claimed invention. However, Djerassi teach a variety of specific acyl groups including phenylpropionyl attached to the 21-position. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the present application to select any of the species of the genus taught by the reference, including

those of the instant claims, because he would have the reasonable expectation that any of the species of the genus would have similar properties, and, thus, the same use as the genus as a whole. The motivation to make the claimed compounds is based on the desire to make additional compounds useful as taught by the prior art.

Claims 11, 12 and 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bowers ('391).

Bowers teaches a generic group of 6α,9α,11β-trichloro and 6α-fluoro-9α,11β-dichloro pregnenes (see the entire article, especially col. 1, lines 14-71). The reference teaches acyl groups such as acetyl and phenylpropionyl (col. 1, lines 62-65), the optional double bond in the 1-position and that the compounds exhibit anti-estrogenic, anti-inflammatory and glycogenic activity and are useful in alleviation of inflammatory conditions (col. 1, lines 66-71).

The instant claims differ from the reference by reciting specific species not exemplified by the reference, i.e., compounds wherein R(1) is phenyl which may be substituted as indicated by the claimed invention. However, Bowers teaches a variety of specific acyl groups including phenylpropionyl attached to the 21-position. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the present application to select any of the species of the genus taught by the reference, including those of the instant claims, because he would have the reasonable expectation that any of the species of the genus would have similar properties, and, thus, the same use as the genus as a whole. The motivation to make the claimed

compounds is based on the desire to make additional compounds useful as taught by the prior art.

Claims 11, 12, 13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oughton et al. ('940).

Oughton et al. teach a generic group of 1,4-diene-3-keto steroid compounds having therapeutic activity (see the entire article, especially col. 1, lines 11-24; col. 2,l lines 10-29). The reference teaches acyl groups such as acetyl and phenylacetyl (col. 2, lines 24-26).

The instant claims differ from the reference by reciting specific species not exemplified by the reference, i.e., compounds wherein R(1) is phenyl which may be substituted as indicated by the claimed invention. However, Oughton teaches a variety of specific acyl groups including phenylacetyl attached to the 21-position. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the present application to select any of the species of the genus taught by the reference, including those of the instant claims, because he would have the reasonable expectation that any of the species of the genus would have similar properties, and, thus, the same use as the genus as a whole. The motivation to make the claimed compounds is based on the desire to make additional compounds useful as taught by the prior art.

(11) Resp ns to Argument

Applicant's argument is that none of the cited references exemplifies a compound wherein the 21-substituent has an aralkyl group as claimed by the present invention. Applicant also argues (a) claims 12-14 depending from claim 11, further define the other substituents in formula I and that there is no motivation in the prior art to simultaneously select all of these substituents as presently claimed and (b) even if the Examiner could have established a prima facie case of obviousness, the claimed compounds possess unexpectedly better properties over the prior art and reference is made to the page 15, line 12 to page 19, line 16 of the present specification. Applicant's argument is not persuasive for the following reasons.

First, the prior art teaches each and every group recited by the instant claims and, thus, the claimed genus of compounds is encompassed by the cited prior art. The prior art also exemplifies compounds having a 21-ester group (RCOO) but does not exemplify an aralkyl group as presently claimed (Note: Djerassi **'429** exemplifies an aryl containing acyl group, see col. 6, example XII, i.e., 17,21-dibenzoates of the compounds disclosed in said example). However, a reference is evaluated on what it teaches one of ordinary skill in the art and not only on what is exemplified.

Second, each cited reference discloses compounds wherein the 21-position is substituted with an ester group and/or teaches specific ester groups including esters having an aralkyl moiety. For example, as indicated by applicant, sixteen of thirty-three compounds exemplified by Page have 21-ester substituents. Page also teaches that when R_5 is RCOO, R is one of three groups, i.e., an alkyl group, an aralkyl group or a

phenyl group. Because of the limited number of R groups, each would be readily envisaged by the ordinary artisan in the art and, thus, modifying the exemplified compounds by replacing said exemplified group with one of the other two groups taught by Page would be prima facie obvious. The other cited references also teach 21-ester substituents and each of the preferred groups include ester groups encompassed by the instant claims, for example, phenylacetyl (Oughton **'940**, col. 2, line 24) and phenylpropionate (Djerassi **'429**, col. 1, line 53; Bowers **'391**, col. 1, line 65). Thus, the prior art provides guidance to enable the ordinary artisan in the art to make the prior art compounds wherein the 21-ester substituent contains an aralkyl moiety.

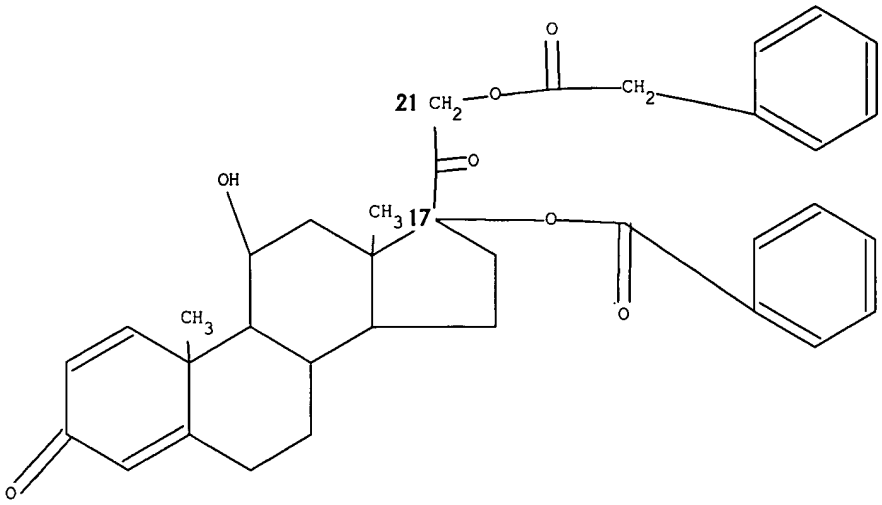
In regards to claims 12-14, applicant argues that there is no motivation to simultaneously select all of the specific substituents recited by the instant claims. Again, the examiner notes that the prior art is evaluated based on what is taught and not by its working examples. The cited prior art teach each of the recited substituent as well as a use for the prior art compounds. Thus, the motivation to make any of the species, including those of the instant claims, would be based on the desire to make additional compounds as taught by the prior art having the uses taught by the prior art. In addition, (a) in regard to claim 12, Page and Djerassi exemplifies compounds wherein R(2) is phenyl (see example 19 of Page and example XII of Djerassi) and (b) in regard to claim 14, example 19 of Page exemplifies A as CHOH, Y as fluorine, Z as hydrogen R(2) as phenyl and R(3) as β-methyl. The difference between example 19 of Page and claim 14 is in the exemplified substituent in the 21-position. As stated above, the prior art teaches and exemplifies 21-acyl groups, including aralkyl containing acyl groups,

and, thus, said groups would be obvious to the skilled artisan based on the prior art teachings. The difference between claims 13 and 14 of the claimed invention is in the definition of Y (i.e., the substituent in the 9-position) and, thus, claim 13 also differs from example 19 of Page in the 9-substituent. However, Page teaches said position can be one of three substituents, hydrogen, chlorine or fluorine. Oughton also teaches a limited number of substituents in said position, i.e., hydrogen or halogen, particularly fluorine. Because of the limited number of substituents taught by the prior art, the skilled artisan would readily envisage each. In addition, applicant has not provided any factual evidence that would make it unobvious to select the specific combination of substituents as recited by claims 12-14.

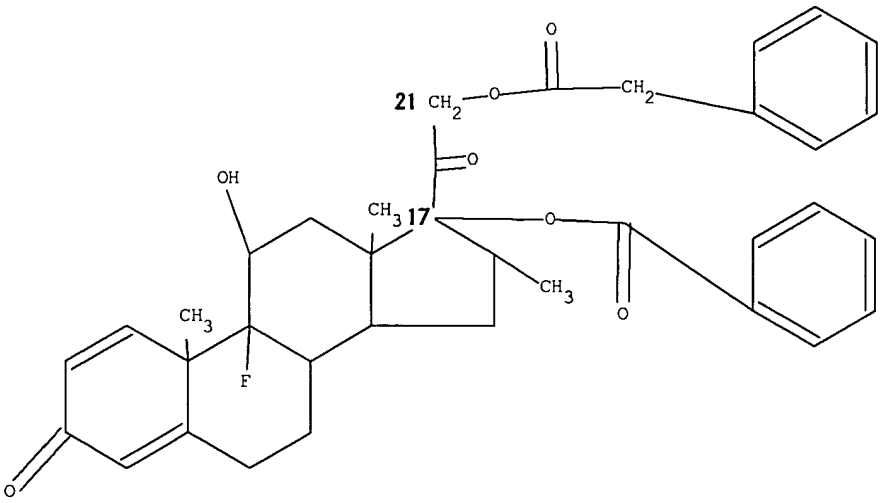
Lastly, applicant argues unexpectedly superior properties. The data presented in support of said properties is not a true side-by-side comparison of the claimed compounds and the closest prior art compound. Applicant argues that **prednicarbate** contains *an ethyl group corresponding to R_5 of Page* rather than an aralkyl group as presently claimed. However, prednicarbate has an alkoxy (Oalkyl) and not an alkyl group as taught by Page. Thus, prednicarbate does not contain any of the R_5 substituents taught by Page or any of the other cited references.

The structures of compounds I, II and prednicarbate as disclosed by the present specification (see page 15, line 12 to page 19, line 16) are shown below:

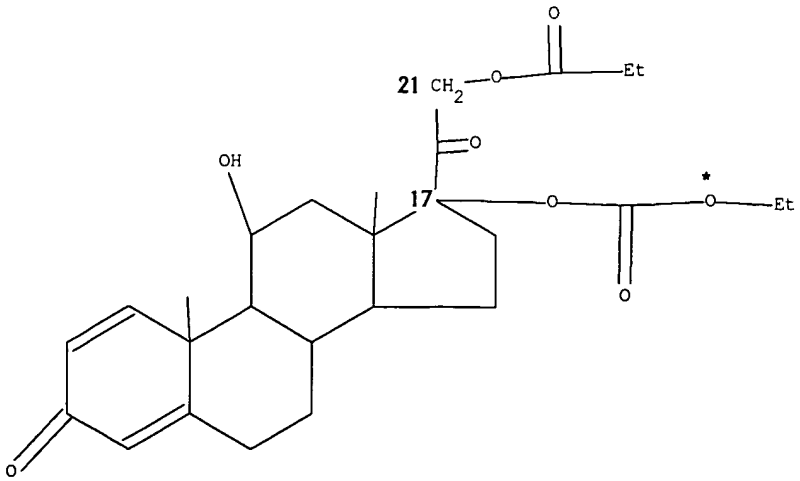
Compound I



Compound II



Prednicarbate



Prednicarbate differs from claimed compounds I and II in both the 17 and 21 positions (Note: prednicarbate contains a carbonate (ROCOO) group whereas compounds I and II have a carboxylate (RCOO) group as is taught by the prior art). In addition, compound II, unlike prednicarbate, contains a 9-fluoro group and a 16-β-methyl group. The prior art compound utilized by applicant differs from the claimed compounds in 2 or 4 positions and does not contain any of the 21-acyl groups taught or exemplified by any of the cited prior art. A true side-by-side comparison would consist of a comparison between the closest prior art compound that differs only in the acyl group attached to the 21-position. Without said comparison, the skilled artisan would be unable to evaluate the effect of utilization of an aralkyl containing acyl group as argued by applicant. Therefore, applicant's argument of unexpectedly superior properties is not persuasive.

In summary, the presently claimed invention is prima facie obvious because (a) each and every substituent recited is taught by the cited references; (b) the prior art exemplifies numerous compounds having 21-acyl groups; (c) the prior art exemplifies preferred aralkyl acyl groups which encompasses groups recited by the instant claims and, thus, provide guidance to the skilled artisan to make compounds having an aralkyl acyl group in the 21-position and (d) the comparison presented in the present specification is not a true side-by-side comparison and, thus, does not provide evidence of unexpected superior properties as argued.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,
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October 16, 2002

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